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STATE OF UTAH  
DEPARTMENT OF HEALTH  
DIVISION OF ENVIRONMENTAL HEALTH  
Utah Water Pollution Control Committee  
150 West North Temple, P.O. Box 2500, Salt Lake City, Utah 84110-2500

File  
Union Carbide  
Hecla Shaft  
Copy to Tantor  
& Wayne

October 19, 1983  
533-6146

Calvin K. Sudweeks  
Executive Secretary  
Rm 410 (801) 533-6146

AOT/031/043

JIM  
OCT 25 1983  
RECEIVED  
OCT 21 1983

DIVISION OF  
OIL, GAS & MINING

Bruce A. Greene  
Mine Superintendent  
Union Carbide Corporation  
LaSal, Utah 84530

RE: Hecla ponds

Dear Mr. Greene:

We have reviewed the information submitted September 15, 1983 regarding the Union Carbide Hecla Mine ponds. We do not consider the information sufficient to indicate either a satisfactory pond or monitoring system.

We normally expect uranium mine wastewater to be treated to effluent standards or be contained in ponds with permeability of less than  $1 \times 10^{-6}$  cm/sec. This would also apply to inactive mines pumping water from underground. Pursuant to the August meeting, we expected that a cost estimate for a lined pond would be submitted by September 16, 1983. We consider the new proposal to submit the information at some unspecified time later in the year an inadequate response to our July 8 and August 23, 1983 letters. Based upon the April 6, 1983 site inspection by Steven McNeal of this Bureau and the recently submitted geological cross section, the upper 28 feet of alluvial soil conditions do not appear adequate for mine wastewater containing radium pumped to an unlined pond.

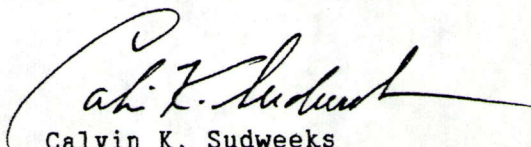
In addition the proposal to monitor only the observed seep is an insufficient monitoring system for unlined ponds. Additional monitoring wells should be located down dip and on each side of the ponds. It should be made clear, however, that a monitoring system is not considered an adequate substitute to a properly designed treatment system. It is our opinion that a satisfactory treatment system should be designed at this time.

Therefore, we request that acceptable design information for treatment or ponds be submitted to this office by

November 14, 1983. As an interim measure, monthly monitoring data of the seep for radium, uranium, pH, and TDS must also be submitted as soon as the analyses are completed.

Sincerely,

UTAH WATER POLLUTION CONTROL COMMITTEE

A handwritten signature in dark ink, appearing to read "Calvin K. Sudweeks", with a long, sweeping horizontal line extending to the right.

Calvin K. Sudweeks  
Executive Secretary

SRM:na

cc: Oil, Gas and Mining  
Union Carbide - Grand Junction - Rich Miller  
Southeastern Utah District Health Dept.

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